

ABSTRACT

A supply voltage conversion circuit allowing fabrication of a charge pump circuit having a large current capability with a small area is provided. In a charge pump DC-DC converter (10) for converting a supply voltage VDD1 to a supply voltage VDD2, a level shifter (12) implements amplitude conversion to convert from a control pulse with amplitude of $VSS - VDD1$ to a control pulse with amplitude of $VSS - VDD2$. By using the control pulse having the converted amplitude as a pumping pulse, a flying capacitor (C11) is charged/discharged by MOS transistors (Qp11), and (Qn11) of a charge pump circuit (11), and switching of MOS transistors (Qn12), and (Qp12) coupled to the output of the flying capacitor (C11) is controlled.